B' Cont'd

structural parameters in moxonidine treated and untreated infarcted hearts were determined by Student t-test independently for the two groups.

REMARKS

Favorable consideration and allowance are respectfully requested for claims 1-5 in view of the foregoing amendments and the following remarks.

The modification of the specification requested in the preliminary amendment has been corrected to recite page 10, rather than page 11, as properly pointed out by the Examiner.

In the Office Action dated April 9, 2002, claims 1-5 were rejected under 35 U.S.C. § 102(b) as being anticipated by International Publication No. WO 97/46241 (the "'241 application"); claims 1-5 were rejected under 35 U.S.C. § 102(b) as being anticipated by Lepran et al., "Effect of Moxonidine on Arrhythmias Induced by Coronary Artery Occlusion and Reperfusion," Journal of Cardiovascular Pharmacology, S9-S15 (the "Lepran article"); and claims 1-5 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the '241 application. These rejections are respectfully traversed.

Rejections under 35 U.S.C. § 102(b)

Claims 1-5 were rejected as anticipated by the '241 application and the Lepran article. Claim 1 recites a method of treating a patient who has suffered a myocardial infarction by administering the claimed compounds "to inhibit myocardial damage secondary to myocardial infarction." In stating that the '241 application "does not explicitly state postmyocardial infarction or recovery of myocardial status, as claimed," Office Action at 3, and that the '241 application "does not clearly state that moxonidine is used in amounts effective for postmyocardial management or for recovering myocardial status," Office Action at 5, the Examiner admitted that the '241 application fails to teach each and every feature of the claimed invention. As such, claims 1-5 are not anticipated by the '241 application.

The '241 application is limited to the use of moxonidine in the form of a pharmaceutical "non-immediate release" composition for the treatment of congestive heart failure and only refers to hemodynamic parameters. See, e.g., page 10, lines 24-28 and 32 (describing the effects of the immediate release formulation in the context of congestive heart failure); page 12, lines 8-10 (pointing out the measurement of hemodynamic parameters in congestive heart failure patients). Therefore, because the claimed invention does not pertain to the improvement of hemodynamic parameters, which is the focus of the '241 application, the claimed invention is distinct from the '241 application for this additional reason.

Significantly, patients suffering from myocardial infarction or from myocarditis were excluded from the study presented in the '241 application. Page 32, lines 13-15 and 23. This exclusion of this group of patients, alone, refutes any assertion of anticipation or obviousness of the claimed invention in light of this disclosure. The portions of the '241 application relied upon by the Examiner, e.g., page 1, lines 22 through page 3, line 36, and page 4, lines 12-14, only refer to the known state of the art symptoms observed in the context of congestive heart failure and are in contrast to the exclusion of patients with myocardial infarction or myocarditis.

Nothing in the '241 application discloses information with regard to the treatment of damage, and, in particular, nothing is taught or suggested regarding the positive regenerative effects of moxonidine with regard to myocardial damage which is subsequent, e.g., secondary, to infarction. These secondary effects are distinct from the hemodynamic effects described by the '241 application.

Regarding the rejection relating to the Lepran article, the Examiner admits that the Lepran article "does not explicitly state 'postmyocardial management or recovery or rehabilitation.'" As such, claims 1-5 are not anticipated by the Lepran article.

The Lepran article is limited to describing the effects of moxonidine on arrhythmias induced by myocardial ischemia or reperfusion in an animal model.

Similarly, as in the '241 application, the Lepran article focuses on hemodynamic characteristics in connection with pre-treatment with moxonidine before inducing ischemia. See, for example, the "short-term ischemia model" referred to at page 12, right column, lines 9-10, and page 14, left column, lines 15-17. Although the Lepran article refers to infarct size, the results regarding the dosages are contradictory. The notion that arrhythmias or ventricular fibrillation equates to "damage" is incorrect, because the effects discussed in the Lepran article are distinct from the damage recited in the claims. The claimed invention is distinct from the disclosure in the Lepran article, as it does not pertain to the treatment of arrhythmias nor to the improvement of hemodynamic parameters.

The Lepran article also fails to disclose anything about the positive regenerative effects of moxonidine with regard to myocardial damage that is subsequent, e.g. secondary, to infarction. These effects are distinct from arrhythmia or hemodynamic effects and, as such, the Lepran article fails to teach each and every feature of claims 1-5 for this reason as well.

The patentability of the claimed invention is further evidenced by the distinct set of experiments disclosed in the specification relating to the use of moxonidine to prevent or inhibit myocardial damage secondary to myocardial infarction. The data disclosed by Applicant relate to measurement of the effects that are indicators of damage to heart tissue, e.g., parameters like interstitial collagen (remodeling effect), heart weight, and heart weight-body weight ratio (hypertrophy). These effects are distinct from hemodynamic or merely functional effects as disclosed in the '241 application and Lepran article.

Accordingly, withdrawal of the rejection of claims 1-5 pursuant to 35 U.S.C. § 102(b) is respectfully requested.

Rejection under 35 U.S.C. § 103(a)

Claims 1-5 were rejected as being obvious over the '241 application. The '241 application fails to teach or suggest the administration of compounds of formula I to inhibit myocardial damage secondary to myocardial infarction as

discussed above. Because the '241 application relates to hemodynamic effects and not to myocardial damage secondary to myocardial infarction, it would not have been obvious to administer moxonidine to patients as alleged in the Office Action. Accordingly, withdrawal of the rejection of claims 1-5 under 35 U.S.C. § 103(a) is respectfully requested.

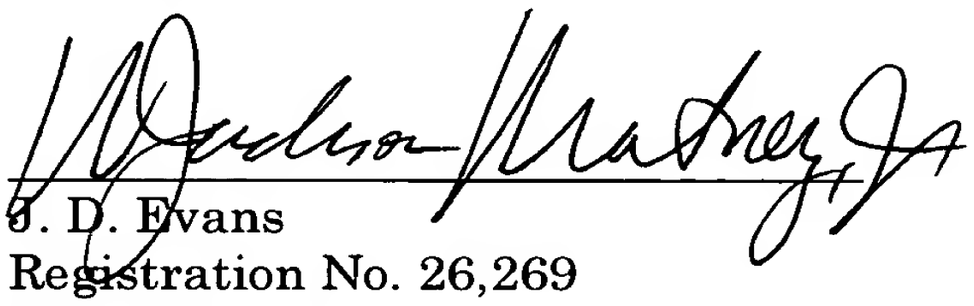
In view of the foregoing amendments and remarks, the application is respectfully submitted to be in condition for allowance, and prompt favorable action thereon is earnestly solicited.

If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response; please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #147/50194).

Respectfully submitted,

September 9, 2002



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MARKED-UP VERSION TO SHOW CHANGES

Please rewrite the paragraph appearing at lines 2 through 12 of page 10 as follows:

The data obtained were expressed as group means ± SEM (standard error of the mean) unless otherwise stated. Only data of infarcted hearts with an infarct area covering the major portion of the free heart wall of the left ventricle were included in the evaluation since smaller infarct areas are usually fully compensated hemodynamically. The data were analyzed by one-way analysis of variance (ANOVA) followed by post-hoc Bonferroni analysis. Differences in the structural parameters [of the vessels] in moxonidine treated and untreated infarcted hearts were determined by Student t-test independently for the two groups.